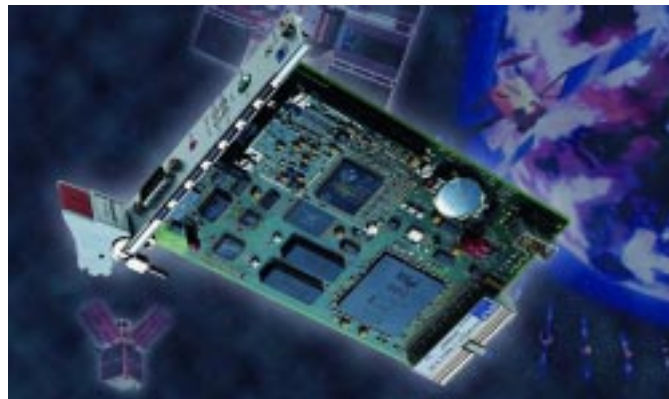




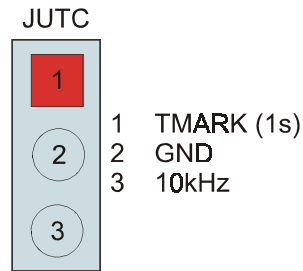
Application Note

Using the CG1-RADIO *CompactPCI*[®] GPS Receiver to Synchronize External Events to the UTC

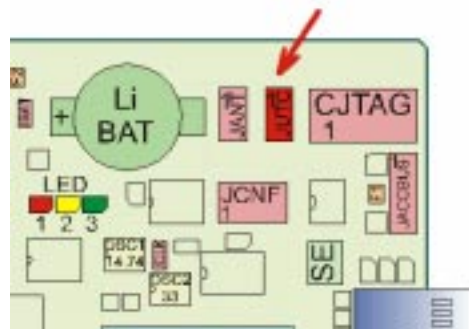
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The CG1-RADIO can be used to synchronize external events with the UTC (Universal Time Coordinated). The board generates two output signals, named **utctmark** and **utc10kHz**, which can be used for various purposes. Both signals are wired to the (optional) 3-pin header connector JUTC.



This connector is located near the Lithium cell. If the board is not equipped with this (optional) connector, the position can easily be filled by the customer with a three pin 0.1" (2.54mm) pitch header.



The Time Mark output **utctmark** provides a one pulse-per-second (1pps) signal to the user specific application. When the receiver provides a valid navigation solution, the rising edge of each utctmark pulse is synchronized with the UTC one second epochs to within $\pm 300\text{ns}$. This signal is a positive logic, buffered CMOS level output pulse that transitions from a logic 'low' condition to a logic 'high' at a 1 Hz rate. The pulse duration is typically 25.6ms. The 10kHz UTC Synchronized Clock signal **utc10kHz** is a symmetric, buffered CMOS level output, synchronized to the utctmark pulse. More detailed information can be obtained from the document "Jupiter GPS Receiver", order no. GD003G, Conexant Systems Inc., <http://www.conexant.com>.

The Time Mark signal also can be observed from the CG1-RADIO front panel display (yellow LED, right side).

